

PRELIMINARY AMENDMENT

U.S. Appln.: 10/534,408

Attorney Docket No.: Q87477

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A method of manufacturing a preform for producing a plastic optical component comprising a graded-index core portion and a cladding portion in which the refractive index of the core portion continuously decreases from its center to the outer radius, and the refractive index of the cladding portion is smaller than that of the center of the core portion by 0.03 or more, comprising;

 a first step of fabricating a polymer hollow tube for the cladding portion in which the inner wall of the polymer hollow tube has an arithmetic mean roughness of less than 0.4 μm ;
and

 a second step of polymerizing a polymerizable composition in the hollow portion of the hollow tube to thereby form the core portion.

2. (original): The method of manufacturing a preform for producing a plastic optical component of Claim 1, wherein the first step the hollow tube is fabricated by melt extrusion molding or injection molding.

3. (original): The method of manufacturing a preform for producing a plastic optical component of Claim 1 or 2, wherein the hollow tube is composed of a homopolymer or copolymer of a fluorine-containing monomer.

PRELIMINARY AMENDMENT

U.S. Appln.: 10/534,408

Attorney Docket No.: Q87477

4. (currently amended): The method of manufacturing a preform for producing a plastic optical component of ~~any one of~~ Claims 1-~~to~~-3, further comprising, before charging the polymerizable composition to the hollow tube, a step of forming an outer core layer on the inner wall of the hollow tube, in which the outer core layer is composed of a polymer having the same composition as the matrix of the core portion.

5. (currently amended): The method of manufacturing a preform for producing a plastic optical component of ~~any one of~~ Claims 1-~~to~~-4, wherein the hollow tube is composed of a fluorine-containing resin obtained by polymerizing a polymerizable monomer composition containing 10% by mass or more of vinylidene fluoride.

6. (currently amended): The method of manufacturing a preform for producing a plastic optical component of ~~any one of~~ Claims 1-~~to~~-5, wherein the core portion has a matrix composed of an acrylic resin having an alicyclic hydrocarbon group as a side chain.

7. (currently amended): A preform for producing a plastic optical component obtained by the method of manufacturing a preform for producing a plastic optical component of ~~any one of~~ Claims 1-~~to~~-6.

8. (original): A method of manufacturing a plastic optical fiber comprising a step of stretching the preform of for producing a plastic optical component of Claim 7 under heating 400 to 20,000 times.

9. (original): A plastic optical fiber obtained by the method of manufacturing a plastic optical fiber of Claim 8.

PRELIMINARY AMENDMENT

U.S. Appln.: 10/534,408

Attorney Docket No.: Q87477

10. (original): A polymer hollow tube for an optical component having an inner wall with an arithmetic mean roughness of less than 0.4 mm.

11. (original): An apparatus for fabricating a polymer hollow tube for an optical component, comprising a manufacturing line for melt extrusion molding.